



Construction Of Novel **CERT**ification
meth**O**ds and means of compliance
for disruptive technologies

con**cert**o   





ABOUT

CONCERTO is an EU-funded project, under the Clean Aviation Programme, with the primary objective to develop an innovative digital certification framework and to draft regulatory material tailored to disruptive technologies, thereby facilitating the rapid and secure integration of more sustainable aircraft into service.

The project's focus involves the development of a comprehensive set of regulations for aircraft certification, accompanied by a preliminary description of Methods of Compliance (MoCs) applicable to the three pillars of Clean Aviation (Active Wing, Hydrogen, High Voltage Distribution). Another key objective is to assess the feasibility of a digital certification framework that fosters collaboration and supports model-based certification.

Anticipated outcomes include an enhanced level of safety, streamlined timelines for introducing new products to market and into service, and the continued maintenance of European leadership and competitiveness. The results are designed to be transposable and scalable across diverse product lines and aircraft segments, including general aviation, rotorcraft, business jets, and commercial medium-to-long-range aircraft, ultimately impacting the entire fleet.

The composition of the project consortium reflects a smart mix of aircraft manufacturers, engine manufacturers, equipment manufacturers, research centres, universities, SMEs, and PLM experts, while maintaining close collaboration with airworthiness authorities (EASA).



Proofs of concept for disruptive technologies

Digital tools to support the certification process

Optimization of timing and associated cost of certification





METHODS & TOOLS



CRL scale

Building, validation and use of the Certification Readiness Level (CRL) scale to evaluate the certifiability of a disruptive technology.



Digital Certification Framework

Enhancing collaboration on certification data, from rulemaking to type certificate, optimizing timing and associated costs.





MEANS OF COMPLIANCE

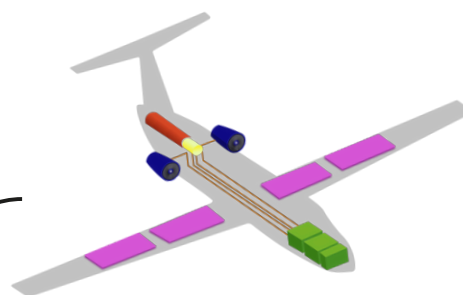
Implementation of the above principles and development of MoCs with three Proof of Concepts (PoCs) for three emblematic technologies with certification challenges, linked to each Clean Aviation thrust.



Active Wing

Active GLA
Flutter suppression
Low frequency mode control

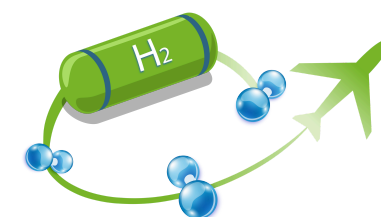
SMR



High Voltage Safety

Electric Arcing
Battery safety
Thermal safety

HER



Hydrogen Integration

Fuel tank integrity
Fire prevention

H2



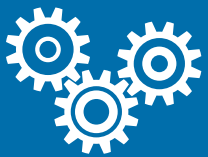


EXPECTED IMPACT



Environment

Key enabler towards the reduction of emissions and EU's objective of climate neutrality by 2050



Competitiveness

Reduction of the development time and cost to introduce new products to the market



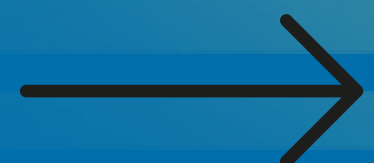
Socio-economic/cultural change

Creation of an ecosystem, by fostering networking, sharing common goals and developing synergies



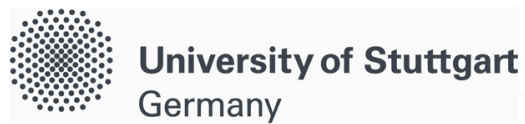
International influence

Reinforcement of Europe's role as leader of worldwide new certification frameworks





TEAM





Connect with CONCERTO

101101999 

01.01.2023 

48 months 

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The project is supported by the Clean Aviation Joint Undertaking and its members.

Funded by the European Union, under Grant Agreement No 101101999. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or Clean Aviation Joint Undertaking. Neither the European Union nor Clean Aviation JU can be held responsible for them.